THE INFLUENCE OF FINANCIAL KNOWLEDGE, FINANCIAL CONFIDENCE, AND INCOME ON FINANCIAL BEHAVIOR AMONG THE WORKFORCE IN JAKARTA

Agus Zainul Arifin, Kevin dan Halim Putera Siswanto
Faculty of Economics - Tarumanagara University - Jakarta
agusz@fe.untar.ac.id/kevin15130321@gmail.com/halimputera@yahoo.com

Abstract. The purpose of this study is to analyze the influence of financial knowledge, financial confidence and income, on financial behavior. This research is based on TPB Model and Behavioral Finance Theory, and it was carried out based on the phenomenon that occur at present whereas the community is more focused on short-term rather than on long-term. The Theory of Planned Behavior that rates the knowledge, self-confidence, and income becomes the basis of financial behavior of individuals, which become the topic of this research. The subjects in this study are the people of Jakarta Special Region, which includes the group of workforce who have already had the job and fixed income every month. The results of this research show that Financial Knowledge and Financial Confidence do affect Financial Behavior, whereas Income does not appear in the same way.

Keywords: Financial Behavior, Financial Knowledge, Financial Confidence, Income

Abstrak. Tujuan penelitian ini adalah untuk menganalisis pengaruh pengetahuan keuangan, keyakinan keuangan, dan pendapatan terhadap perilaku keuangan. Penelitian ini didasarkan pada teori utama yaitu Model TPB (*Theory Of Planned Behavior)* dan teori perilaku keuangan. Penelitian ini didasarkan pada fenomena mengenaui pengelolaan dana oleh masyarakat yang lebih fokus pada jangka pendek dari pada jangka panjang. Subjek dalam penelitian ini adalah warga masyarakat DKI Jakarta yang mencakup kelompok tenaga kerja yang telah memiliki pekerjaan dan penghasilan tetap setiap bulan. Hasil penelitian ini menunjukkan bahwa pengetahuan keuangan dan keyakinan keuangan memengaruhi perilaku keuangan, sedangkan pendapatan tidak berpengaruh terhada prilaku keuangan

Kata Kunci: Perilaku keuangan, pengetahuan keuangan, keyakinan keuangam, pendapatan

INTRODUCTION

Ajzen and Fishbein (1980) provided the theory of reasoned action underlying by the assumption that humans behave in a logical way, considering all available information, and to directly or indirectly take into account the impact of the actions they do. Azwar (2010) says that in a simple theory of reasonable action, the individual will perform an act when he or she looks at the deeds that are positive and if he or she believes that other people want him or her to do such a feat. Intention of doing or not doing a particular behaviour is influenced by two basic determinants, that are attitude coming from confidence in behavior (behavioral belief) and subjective norms originating from normative beliefs (normative belief).

Furthermore, the theory of planned behavior adds a third factor, that is controlled behavior (controlled belief).

Behavioral finance is part of the behavioral economics of finance with the support of theories on scientific behaviour, and others are mainly psychology and sociology, trying to find and explain the events that are not consistent. Ricciardi and Simon (2000) explains that the principal of behavioral finance is trying to explain what, why, and how about the finance and investment from the perspective of a man. Behavioral finance comes to surface inline with the development of academic and business worlds, which began the existence of behavioral aspects in the decision-making process of finance and/or investment. It is much inspired by the increasing role of the behavior as one of the determinant in deciding to buy and sell securities.

Pompian (2006) explains that behavioral finance is divided into micro and macro behavioral finance. Macro behavioral finance questions whether the market is efficient or the market is affected by the impact of behavioral finance. Micro behavioral finance questions whether investors are acting rationally, or whether cognitive and emotional error can affect their financial decisions. On micro behavioral finance, the matter is how to classify individuals on the basis of characteristics, trends, or any particular behaviours.

Hilgert *et al.*, (2003) states that individuals act rationally, which is indicated by the activity of financial planning, management, and control. Good financial behavior indicators can be seen from a person's attitude to manage the influx of money, credit management, savings and investment. In other words, individuals will allocate their revenues for short-term needs (consumption) and long-term needs (investment). Olsen (1998: 11) states that the purpose of financial behavior is to understand and predict the implications, which is systematic financial market implications from the psychological point of view.

Survey results from Manulife (Manulife, 2016) states that people in Indonesia are likely to behave economically irrational. This is supported by the fact that Indonesian investors only think about short-term planning, without thinking about long-term one. Manulife (2016) concluded four aspects, which are: (1) 70% majority of investors do not have a target number on long-term deposits. (2) 53% of investors spend 70% or more of their income in a month. (3) investors spend 10% to 90% or more of his/her salary, and (4) 40% of investors do not monitor their spending at all.

Based on the fact and theory, it can be inferred that the behavior of people in Jakarta are likely to be irrational in spending their revenues. This research would like to know the factors that affect a person's financial behavior, particularly on the workforce in Indonesia.

LITERATURE REVIEW

The form of a healthy financial behaviors is demonstrated in decision making. In terms of decision making related to financial problems, very good financial understanding is needed anyway. A good understanding on the forms of financial problems or more commonly known by the term of financial literacy should be a concern for everyone. Overally, financial literacy can be defined as a set of processes or activities to improve knowledge, skills, and confidence of consumer or community, so that they are able to manage their personal finances better. In addition to the

financial knowledge and financial confidence, the amount of revenue is allegedly influenced by the financial behavior of a person. There is the possibility that individuals with higher income sources will show more responsible financial behavior.

Nofsinger (2001) defines that behavioral finance studies about how humans behave in an actual determination of finance. In particular, behavioral finance is the study on how psychology affects financial decisions, companies, and financial markets. According to Nababan and Sadalia (2012), financial behavior is related to how a person treats, manage, and use existing financial resources.

Keller and Staelin (1987) mentioned that financial knowledge can be obtained from education, including formal education such as schools, seminars, training, and non-formal education such as from parents, friends, working and personal experience. According to Halim and Astuti (2015), financial knowledge is the ability to understand, analyze, manage the finance to make the right financial decisions and to avoid financial problems. Capuano & Ramsay (2011) also explained that the factors that will be used to measure Behavioral finance is Finance knowlwdge and financial Confidence. In general, a person who has lower financial knowledge caused by a lower of education. Assuming that a good education can improve the financial knowledge that will impact on financial decision making more effective. Ida & Chintia (2010) stated that the better of financial knowledge has more the better of financial skills in financial management. Perry and Morris (2005) which states that the financial knowledge positive effect on financial behavior.

Lauster (1978), stated that self confidence is an attitude or feeling of being confident over the ability of a person. Judge (2002) stated that self confidence is a belief of a person against any aspect of excess assets and confidence that made him/her feel capable to be able to achieve a variety of goals in his/her life. Allgood dan William B.Wastald (2012) and Assad (2015) have founded that the Financial Knowledge and Financial Confidence influence on Financial Behavior.

According to Nafarin (2007:788), income is the difference between the revenue with the balance of costs and expenses, which have been used for a certain period. According to Case and Fair (2007), income household and individual is the sum of all wages, salaries, profits, interest payments, rents, and other forms of income earned in a specific time period.

Perry and Morris (2005) conducted a study by using data on US consumers in 1999 among individuals with income below the $75,000 per year with a total of 23,000 people and respondents, which stated that Financial Knowledge, Income, and Locus of Control affect Financial Behavior. Allgood and Wastald (2016) conducted a study on the effects of Financial Literacy on Financial Behavior, whereas Financial Literacy consists of Financial Knowledge and Financial Confidence. This research was carried out using the data from NFSC resulting that Financial Knowledge and Financial Confidence affect Financial Behavior.

Hypothesis

Hypothesis 1: There is positive influence of Financial Knowledge on Financial Behavior

Hypothesis 2: There is positive influence of Financial Confidence on Financial Behavior

Hypothesis 3: There is positive influence of Income on Financial Behavior

Method

The population in this research is a group of workforce in Indonesia. The sample used in this study consists of 400 respondents. The non-probability sampling technique, that is judgement sampling or purposive sampling, is used. The tools used for sampling is questionnaire. Questionnaires were spread indirectly through online media, i.e. google chrome, whatsapp, facebook, and email, and directly sent to the respondents by chance in the territory of Jakarta Special Region.

Variables in this research consist of independent and dependent variables. The independent variables are financial knowledge, financial confidence, and income. The independent variable Financial Knowledge and Financial Confidence are measured by using 1-5 Likert scale, whereas Income is measured by using nominal scale. The dependent variable in this research is Financial Behavior. This variable also uses 1-5 Likert scale.

The statistical test used in this research is the test of validity, of which the result can be seen through the value of Convergent Validity, Discriminant Validity, and Average Variance Extracted (AVE). Meanwhile, the result of reliability test can be observed through the coefficient of Composite Reliability and Cronbach's Alpha. In this research, the parameter of R-Square and Goodness of Fit (NFI) are also used, as well as the value of t-statistics for the purpose of hypothesis testing.

Results

Validity Tests This validity test uses the parameter of Convergent Validity and Discriminant Validity, with the results as follows:

Convergent Validity Test. An indicator is considered valid if the test result has a loading factor above 0,5 (Ghozali, 2014). SmartPLS output on loading factors are presented in Table 1. The Table shows that all indicators of all variables are valid.

Table 1. Convergent Validity The Validity Of Test Results

	FB	FC	FK	INCOME
FC 1		0,804		
FC 2		0,910		
FC 3		0,846		
FK1			0,822	
FK2			0,831	
FK3			0,823	
FK4			0,777	
FK5			0,816	
FK6			0,705	
INCOME				1,000
FB1	0,769			
FB2	0,707			
FB3	0,826			
FB4	0,759			
FB5	0,836			
FB6	0,718			
FB7	0,755			
FB8	0,750			
FB9	0,627			
FB10	0,669			

Discriminant Validity Test. The test of discriminant validity with cross-loading value is presented in Table 2.

Table 2. Validity Test Results with Cross-Loading Value

	FB_	FC	FK	INCOME
FB 1	**0.769**	0.505	0.426	0.110
FB 10	**0.669**	0.296	0.399	0.176
FB 2	**0.707**	0.267	0.392	0.191
FB 3	**0.826**	0.419	0.392	0.107
FB 4	**0.759**	0.328	0.403	0.172
FB 5	**0.836**	0.347	0.380	0.127
FB 6	**0.718**	0.339	0.283	0.097
FB 7	**0.755**	0.319	0.322	0.130
FB 8	**0.750**	0.285	0.320	0.092
FB 9	**0.627**	0.317	0.225	0.004
FC 1	0.350	**0.804**	0.443	0.254
FC 2	0.418	**0.910**	0.462	0.128
FC 3	0.427	**0.846**	0.425	0.155
FK1	0.344	0.407	**0.822**	0.221
FK2	0.313	0.355	**0.831**	0.221
FK3	0.340	0.310	**0.823**	0.220
FK4	0.488	0.531	**0.777**	0.151
FK5	0.382	0.433	**0.816**	0.163
FK6	0.384	0.371	**0.705**	0.321
INCOME	0.165	0.204	0.269	**1.000**

In Table 2, the indicator is considered valid if it has the highest factor loading compared to other constructs. Another method to test the discriminant validity is by observing the value of Average Variance

Extracted (AVE). The recommended value of AVE is above 0,5 (Ghozali, 2014). The values of the AVE in this research are presented in Table 3.

Tabel 3. Validity Test Results : Average Variance Extracted (AVE)

	Average Variance Extracted (AVE)
FB	0.554
FC	0.730
FK	0.635
INCOME	1.000

Reliability Test. In this research, the Reliability Test consists of Composite Reliability and Cronbach's Alpha Test. The results of composite reliability will be satisfying if the value is above 0,7 (Ghozali, 2014). Below is the result of composite reliability test, as shown in Table 4.

Tabel 4. Reliability Test Results : Composite Reliability

	Composite Reliability
FB	0.925
FC	0.890
FK	0.912

Table 4 indicates that the value of composite reliability for all constructs is above 0,7 determining that all constructs in the model being estimated are reliable. The value of the composite reliability is 0.890 at the lowest, for constructs FC. This reliability test can also be strengthened with the result from Cronbach's Alpha Test, whereas the output from SmartPLS version 3 provides the results as presented in Table 5.

Tabel 5. Reliability Test Results : Cronbach's Alpha

Variabel	Cronbach's Alpha
FB	0.910
FC	0.815
FK	0.885

The recommended value from Cronbach's Alpha Test is above 0.6 in order for the constructs to be reliable. In the table above, the values of Cronbach's Alpha for all constructs are above 0.7 (Ghozali, 2014). The lowest value is 0.815 for construct FC. These results suggest that the constructs of FB, FC, and FK surpass the test of reliability.

Test of Coefficient Determination. Testing inner structural model is conducted in order to observe the relationship between the variable, whereas the R-Square parameter is used. Here is the value of R-Square as presented in Table 6.

Tabel 6. Test Results : R^2

	R-Square
FB	0,300

The Coefficient of Determination (R-Square) shows that the variation of FB can be explained by the variation of FK, FC, and Income by 30%, and the remaining 70% is explained by other factors which are not presented in the model.

Test of Goodness of Fit (GOF). The value of this test ranges from 0 to 1. Getting closer to 1 means that the model is getting fit (or the better) (Ghozali, 2014). The accuracy of this model is presented in Table 7.

Tabel 7. Test Results : NFI

	Saturated Model
NFI	0.791

Contribution of Indicator to the Variable. Statistical testing on every relationship that is hypothesized by PLS, is conducted by using the bootstrap method for samples. Testing by using bootstrap method is also intended to minimize the problem of the lack of normalities among research data. The test results by using bootstrap method analyzed by PLS can be observed in Exhibit 1.

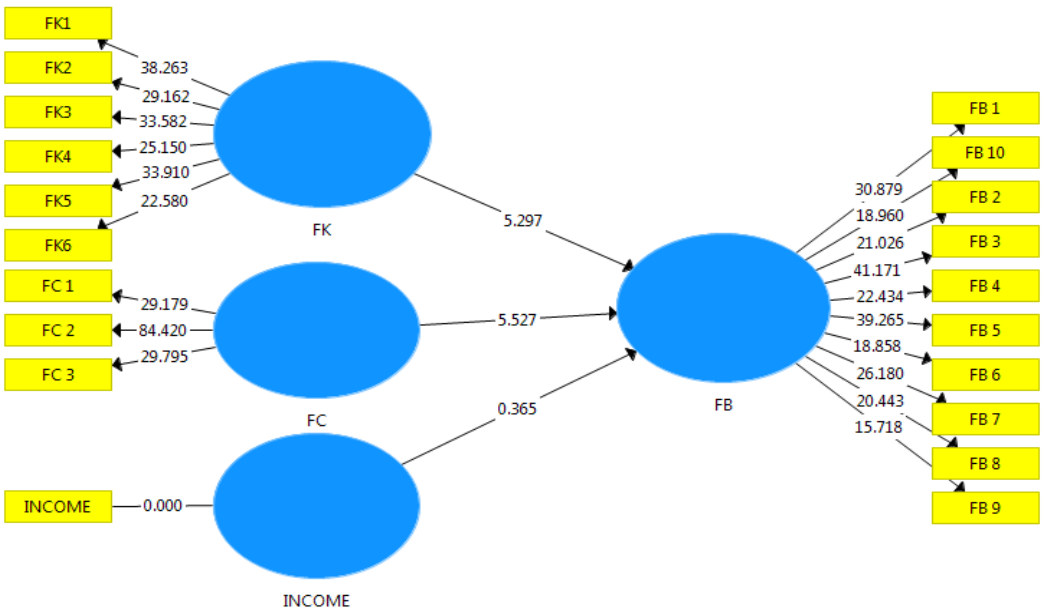

Exhibit 1. Research results by using bootstrapping model

Explanation on Exhibit 1 is provided as follows:

Indicator of Financial Knowledge Variable. The results of the analysis by using bootstrapp method shows the results as follows: FK1 (Interest Rate) : 38.263, FK2 (Credit Fine) : 29.162, FK3 (Credit) : 33.582, FK4 (Financial Management) : 25.150,

FK5 (Investment) : 33.910 and FK6 (Credit Card Billing Statements) : 22.580. FK1 with a value of 38,263 contributes the highest compared to other indicators.

Indicator of Financial Confidence Variable. The results of the analysis by using bootstrapp method shows the results as follows: FC 1 (Financial Knowledge) : 29,179, FC 2 (Financial Calculation) : 84.420, and FC 3 (Financial Problem Solving) : 27.975. Financial Calculation with a value of 84.420 has the highest contribution compared to other indicators. This could happen because people who consider themselves experts in calculating, may have higher confidence.

Indicator of Financial Behavior Variable. The results of the analysis by using bootstrapp method shows the results as follows: FB1 (Financial Control) : 30.879, FB2 (Bill Payment) : 21.026, FB3 (Financial Planning) : 41,171, FB4 (Necessity Fulfillment) : 22.434. FB5 (Saving1) : 39,265, FB6 (Saving2) : 18.858, FB7 (Pension Fund & Insurance) : 26.180, FB8 (Allowance) : 20,443, FB9 (Budgeting) : 15,718, FB10 (Credit Card Payment) : 18.960. FB3 with a value of 41,171 has the highest contribution than other indicators. This may happen because we believe that good financial behavior requires good planning.

Hypothesis Testing (t-Statistics). The influence of independent variable toward dependent variable is significant as stated in the results of t-statistics, which is greater than 1.96 (at 5% significance level). The results of t-statistics of each variable can be observed in Table 8.

Tabel 8. Test Results of t-Statistics

Influence	Original Sample (O)	T Statistics (|O/STDEV|)	p-Values
FC -> FB	0.296	**5.527**	0.000
FK -> FB	0.326	**5.297**	0.000
Income -> FB	0.019	**0.365**	0.715

The Influence of Financial Confidence on Financial Behavior. The first test result shows that the influence of Financial Confidence on Financial Behavior is significant with the t-Statistics value of 5,527 (greater than 1,96). The value of the original sample estimate is positive (0,296), which suggests that the influence of Financial Confidence on Financial Behavior is positive. This shows that Hypothesis 1 is accepted.

The Influence of Financial Knowledge on Financial Behavior. The second test result shows that the influence of Financial Knowledge on Financial Behavior is significant with the t-Statistic value of 5,297 (greater than 1,96). The value of the original sample estimate is positive (0,326), which suggests that the influence of Financial Knowledge on Financial Behavior is positive. This shows that Hypothesis 2 is accepted.

The Influence of Income on Financial Behavior. The third test result shows that the influence of Income on Financial Behavior is not significant with the t-Statistics value of 0,365 (less than 1,96). This result shows that there is no significant influence of Income on Financial Behavior, which means that Hypothesis 3 is rejected.

Discussion. This research observed 400 individuals matched in the category of workforce, who resided in the territory of Jakarta Special Region. The test results shows that the independent variables having significant influence on the dependent variable (Financial Behavior) are only Financial Knowledge and Financial Confidence, while the independent variable of Income does not. (1) The influence of Financial Knowledge on Financial Behavior The result shows that there is positive influence of Financial Knowledge on Financial Behavior. Respondents involved in this study already have high level of financial knowledge because most of them have already acquired the Bachelor's Degree (D-3, S-1, S-2, S-3), which is approximately 85%. High level of education related to financial knowledge (such as interest rates, credit fine, credit knowledge, credit card bills, financial management, and investment) results in good financial behavior as well, namely: controlling the finance, paying bills on time, planning the financials, fulfilling the needs, preparing money for savings, pension fund, and insurance. The result of this study is consistent with the research conducted by Perry and Morris (2005), Grable *et al.*, (2009), and Ida and Chintia (2010). On contrast, different result occurs when comparing to the studies conducted by Kholilah and Iramani (2013) and Herdjiono and Damanik (2016), whereas Financial Knowledge has no effect on Financial Behavior, because financial education is considered less-effective in many developing countries, and one of them is Indonesia. (2) The influence of Financial Confidence on Financial Behavior. Self-confidence basically is the confidence in oneself or one's own abilities. Ignoffo (1999) simply defines self-confidence as having confidence in oneself. In this research, self-confidence is used as a variable in financial context, whereas this self-confidence is measured with the indicators of financial knowledge, financial calculation, and financial problem solving. The largest contribution to financial confidence, is financial calculation. Based on the results of data analysis using SmartPLS, it can be concluded that there is positive and significant influence of Financial Confidence on Financial Behavior. The results of this study is consistent those conducted by Assad (2015) and Allgood (2016). (3) The influence of Income towards Financial Behavior. In this research, the result shows that there is no influence of Income on Financial Behavior. This means that Financial Behavior is not affected by Income. This could happen because individuals with higher income might not necessarily be able to organize their expenditures properly. Having high income doesn't guarantee the individuals to have good financial behavior, and this tends to make the individuals think short-term and conduct impulsive shopping practices. Individuals with high income are still often experiencing financial problems. In general, if individuals increase their income, and then their expenditures also increase, and sometimes exceeds the addition of income (Kholilah and Iramani, 2013). Nababan and Sadalia (2012), Herdjiono and Damanik (2016) also conducted studies with the same results, of which the increase in parental income doesn't affect their children's financial behaviour, because the excess of income commonly is saved by the parents rather than distributed to their children. This result is also in accordance with the theory of behavioral finance stating that human behavior is not acting rationally, because there are several psychological factors that influence them (Azjen, 1991). (4) As the conclusion of this research, it can be simply stated that Financial Knowledge and Financial Confidence do affect Financial Behavior, both in positive direction, while Income doesn't. Thus, the variable Income may not become a good predictor for Financial Behaviour in this case. This may happen due to the phenomenon that higher income doesn't guarantee that the more proper financial behavior can be applied by an individual.

CONCLUSION AND SUGGESTION

Based on the background, the study of theory, relevant research and analysis, it has been done, of the independent variable, namely Financial Knowledge, Financial Confidence and Income, which affect on Financial Behaviour, it can be concluded that Financial confidence and Financial Knowledge have positive influence to Financial Behaviour, but Income does not has influence to Financial Behavior

For further researcher, this study used a relatively small sample size compared to the total w orkforce in Jakarta. Therefore, in order to describe more good result on financial behavior, then the sample data must be enlarged. In the questionnaire, There was not detected the spread of residence and employment of respondents, so that the spread of the respondents as a condition of the sample is either not met.

REFERENCES

Ajzen, Icek. 1991. *The Theory of Planned Behaviour: Organizational Behavior and Human Decision Processes.* Elsevier Vol. 50, Issue 2, pp: 179-211.

Ajzen, Icek and Fishbein M. 1980. *Understanding Attitudes and Predicting Social Behavior.* Englewood Cliffs, NJ: Prentice-Hall.

Allgood, Sam and Walstad, William B.. 2016. *The Effect of Perceived and Actual Financial Literacy on Financial Behaviour*. Economic Inquiry Vol. 54 No. 1 , pp: 675-697.

Asaad, C. T. 2015. Financial Literacy and Financial Behaviour : Assessing Knowledge and Confidence. *Financial Sevices Review Vol. 24* , pp: 101-117.

Azwar, S. 2010. *Sikap Manusia: Teori dan Pengukurannya.* Yogyakarta: Pustaka Pelajar.

Capuano, Angelo dan Ian Ramsay. (2011). *An Exploration of Financial Literacy Social Influences and Behavioural Economics.* The University of Melbourne.

Case, K. E. and Ray C. Fair. 2007. *Principles of Economics.* Eighth Edition. New Jersey: Pearson Education.

Ghozali, I. 2014. *Structural Equation Modeling Metode Alternatif Dengan PARTIAL LEAST SQUARE (PLS).* Semarang: Badan Penerbit Universitas Diponegoro.

Grable, John E, Joo Yung Park dan So Hyun Joo. 2009. Explaining financial management behaviour for Koreans living in the United States. *The Journal of Consumer Afffairs*, Vol. 43, No.1, pp: 80-107.

Halim, E.K.Y. and Astuti, D. 2015. Financial stressors, financial behavior, risk tolerance, financial solvency, financial knowledge and financial satisfaction. *Journal of Finance FINESTA, Vol. 3*, No. 1, pp: 19-23.

Herdjiono, Irine and Lady Angela Damanik 2016. The effect of financial attitude, financial knowledge, and parental income on financial management behavior. Journal of Management Theory and Practice, Vol. 9, No.3, pp: 226-241.

Hilgert, M. A., Hogarth, J. M., & Beverly, S. G. 2003. Household financial management: The connection between knowledge and behavior. *Federal Reserve Bulletin*, pp: 309-322.

Ida and Chintia Yohana Dwinta. 2010. The effect of locus of control, financial knowledge, and income on financial management behaviour. *Journal of Business and Accounting* , Vol. 12, No. 3, pp: 131-144.

Ignoffo, M. 1999. *Everything you need to know about self-onfidence (Revised Edition).* New York: The Rosen Publishing Group, Inc.

Judge, Timothy A; Erez, Amir; Bono, JoyceE.; Thoresen, Carl J. 2002. *Are measures of self-esteem, neuroticism, locus of control, and generalized self-efficacy indicators of a common core construct?*. Journal of Personality and Social Psychology. 83(3), pp: 639-710.

Keller, Kevin lane and Richard Staelin. 1987. Effects of Quality and Quantity of Information on Decision Effectiveness. *Journal of Consumer Research, 21* , pp: 1-31.

Kholilah, Naila Al and Rr. Iramani. 2013. A study on financial management behavior among Surabaya community residents. Journal of Business and Banking, Vol. 3, No. 1, pp: 69-80.

Lauster, P. 1978. *The Personality Test.* London: Bantam Books,Ltd.

Nababan, Darman and Sadalia. 2012. Analysis on Personal Financial Literacy and Financial Behavior Among Undergraduate Students in Faculty of Economics - North Sumatra University. Journal of USU, Vol. 1 No. 1.

Nafarin, M. 2007. *Penganggaran Perusahaan.* Jakarta: Salemba Empat.

Nofsinger, J. R. 2001. *Investment Madness : How Pychology Affects Your Investing and What to Do About It.* New Jersey: Prentice Hall.

Olsen, R. 1998. Behavioral finance and its implications for stock price volatility. Financial Analysts Journal, 54(2), pp: 10-18.

Perry, Vanessa G. and Marlene D. Morris. 2005. Who is Control? The Role of Self Perception, Knowledge, and Income in Explaining Consumer's Financial Behavior. *Journal of Personal Finance* , Vol. 8, pp: 170-184.

Pompian, M. M. 2006. *Behavioral Finance and Wealth Management. How to Build Optimal Portfolios That Account for Investor Biases. First Edition.* . New Jersey: John Wiley & Sons, Inc.

Ricciardi V. and Simon, H, K. 2000. What is Behaviour in Finance? *Business, Education and Technology Journal*, Fall, pp: 1-9.

www.manulife.com, Accessed in October 2016